INDEX

SOVIET MATERIALS SCIENCE Volume 11, Numbers 1-6, 1975



SOVIET MATERIALS SCIENCE Volume 11, Numbers 1-6, 1975

(A translation of Fiziko-Khimicheskaya Mekhanika Materialov)

Afanas'ev, V. K. - 226 Agalakov, B. M. - 693 Ageev. V. S. - 639 Agulov, I. I. - 320 Akimbekov, Kh. - 466 Akopyan, L. A. - 614 Aksenova, L. I. - 656 Alekseev, S. N. - 424, 601 Alfintseva, R. A. - 456 Alymov, V. T. - 628 Andreikiv, A. E. - 536 Angelopulo, O. K. - 289 Antonova, Z. F. - 312 Aptekar', N. M. - 650 Arkharov, V. I. - 312 Artamonova, R. V. - 275 Astashin, V. Ya. - 323 Avramenko, V. L. - 200 Azarov, N. I. - 33 Azbukin, V. G. - 271

B Babchenko, S. L. - 650 Babei, Yu. I. - 83, 129, 481, 574, Baishumurov, Zh. - 418 Bakshi, O. A. - 176 Balduev, E. V. - 491 Balezin, S. A. - 598 Balter, M. A. - 44 Baranov, M. F. - 493 Baranovskii, V. I. - 693 Barbashev, E. A. - 587 Barkov, A. A. - 604 Bartenev, G. M. - 614 Batychko, S. V. - 714 Bedarev, V. V. - 691 Belokur, I. P. - 305 Belyi, V. A. - 205, 323 Berezhnitskaya, M. F. - 703 Berezhnitskii, L. T. - 501, 540, 666 Berezovskii, L. B. - 223 Berezyuk, I. A. - 327, 497 Bernshtein, M. L. - 373

Blashchuk, V. E. - 160, 560

Bobro, Yu. G. - 493 Bogatov, V. A. - 587 Bogomolov, N. L. - 688 Borisenko, V. A. - 223, 456 Borodaikevich, Z. P. - 486 Botvina, L. R. - 383 Brodyak, Ya. P. - 607 Brykov, N. N. - 403 Bryukhanova, L. S. - 149 Buina, E. V. - 305

C

Chaplya, O. N. - 15 Chechulin, B. B. - 414 Cherepanova, G. I. - 239 Chernyakova, A. A. - 44 Chernyavskii, A. N. - 61 Chuchmarev, A. S. - 78

D

Dalisov, V. B. - 67, 607 Deev, N. A. - 37, 442, 524 Den'shchikova, G. I. - 251 Deryagin, B. V. - 282 Didoshak, V. I. - 233 Didyk, R. P. - 594 Dikii, I. I. - 278, 424 Dmitrieva, T. V. - 320 Dombrovskii, B. O. - 471 Dorzhiev, D. B. - 681 Dubinskii, V. N. - 410 Dubrovskii, K. E. - 433 Dudnik, M. I. - 320 Dukhovskoi, E. A. - 194 Dumanskii, O. I. - 305 Dutsyak, Z. G. - 239

E

Efimovich, E. V. - 197 Efremov, V. Ya. - 119 Efremova, Z. A. - 213 Egorenkov, N. I. - 205 Eremenko, A. S. - 672

Fartunin, V. I. - 475 Fatiev, I. S. - 653 Fedirko, V. N. - 33, 335, 566 Fedotova, L. S. - 235 Fetisova, M. M. - 309 Filimonov, G. N. - 266 Filip'ev, A. A. - 156 Filipovskii, A. V. - 180, 708 Fomenko, V. P. - 357 Furman, A. Ya. - 96

G

Gainutdinov, R. G. - 100, 418 Gaisinskaya, A. M. - 312 Galushchak, O. V. - 116 Gerasimov, V. I. - 656 Gerasimov, V. V. - 153 Getmanskii, A. P. - 691 Gladchenko, A. N. - 530 Gladkii, Ya. N. - 444, 524 Glikman, L. A. - 8 Glukhova, L. K. - 197 Gmyzin, V. D. - 339 Gnatyuk, A. D. - 700 Gnyp, I. P. - 176, 361, 658 Goikhman, B. D. - 86, 315 Gol'dshtein, L. Ya. - 44 Golovin, S. A. - 639 Gol'tsov, V. A. - 231 Golubets, V. M. - 452 Golubnichii, A. V. - 100 Gopanenko, A. N. - 189, 392 Gorak, R. D. - 471 Gorbakon', A. A. - 563 Gorban', V. A. - 160 Gordienko, V. P. - 209, 611 Gorokhovskii, G. A. - 320 Goryachev, N. S. - 80 Goryunov, Yu. V. - 251 Goyan, E. B. - 392 Goryunov, Yu. V. - 448 Gribkova, N. Ya. - 475 Grigor'ev, G. A. - 604 Grigor'ev, V. I. - 70, 209, 611 Grilitskii, D. V. - 305, 550

Gromyak, R. S. - 540 Gronskaya, E. V. - 614 Gryaznov, B. A. - 224 Gubarev, M. K. - 8 Gudimov, M. M. - 215 Guk, V. A. - 403 Gulak, A. I. - 691 Gurevich, S. M. - 160 Guseinov, S. A. - 373 Gusel'nikov, N. Ya. - 12 Gusev, B. A. - 601 Gusti, E. Ya. - 574 Gutman, F. M. - 114, 608

Ι

Il'enko, R. E. - 209 Isaev, N. I. - 15 Ivanets, V. I. - 579 Ivanova, V. S. - 383

K

Kadar, I. I. - 266 Kadyrov, V. Kh. - 180, 708 Kalichak, T. N. - 50, 235 Kalinichenko, Kh. B. - 647 Kalinin, N. G. - 86 Kalmykov, V. V. - 602 Kapinos, V. I. - 217 Karasyuk, Yu. A. - 341 Karimov, S. N. - 715 Karlashov, A. V. - 100, 359, 418, 571, 700 Karpenko, G. V. - 78, 93, 217, 238, 242, 478, 495, 621, 631 Karpinos, D. M. - 180 Karpov, A. P. - 213 Katsov, K. B. - 78, 93, 238, 344, 495, 506 Kepich, T. Yu. - 370 Khaldeev, G. V. - 491 Kirichenko, V. P. - 197 Kit, G. S. - 255 Klimko, A. P. - 400 Kobzaruk, A. V. - 221, 706 Kokora, A. N. - 80 Kokotailo, I. V. - 238, 495 Kolachev, B. A. - 12, 624 Kolesnichenko, V. I. - 240 Kolesnikov, B. N. - 80 Kolevatov, Yu. A. - 75, 215, 350 Kolotov, O. A. - 359 Kopylov, V. I. - 57 Kornblyum, A. P. - 344 Korobov, Yu. M. - 407 Korolev, A. Ya. - 213, 275 Koshevoi, N. S. - 90

Kostiv, L. P. - 278 Kotlov, Yu. G. - 407 Kovalenko, O. I. - 493 Kovtun, V. I. - 285 Kozemchuk, R. S. - 111 Kozin, V. I. - 587 Kozlov, I. V. - 106 Kozlov, P. V. - 475 Kozub, V. V. - 452 Krasovskaya, G. M. - 424 Kravtsov, V. V. - 114, 608 Krestin, G. S. - 28 Krishtal, M. A. - 601 Krokhmal'nyi, A. M. - 50 Kroshkov, B. V. - 424 Kudlak, S. M. - 459 Kudryavtsev, P. I. - 106 Kuklyak, N. L. - 143 Kuksenko, V. S. - 466 Kupchinov, B. I. - 323 Kuroshchenov, A. N. - 217 Kushnarenko, V. M. - 357 Kuslitskii, A. B. - 93, 238, 478, 594 Kuz 'menko, V. L. - 616 Kuz'min, G. G. - 302

L

Kuznetsov, V. A. - 407

Kuznetsov, V. V. - 491

Kuzyukov, A. N. - 223

Lashko, N. F. - 235 Le Van Zien - 448 Lemeshko, A. M. - 456 Lenets, N. A. - 497 Levin, D. M. - 639 Levitskii, M. O. - 421, 596 Lisin, V. N. - 359 Lisitsyn, A. P. - 119 Litovchenko, G. D. - 119 Litovchenko, N. A. - 197 Litvin, A. K. - 396 Lizun, O. Ya. - 560 Lobashev, B. P. - 194 Loshak, M. G. - 582, 700 Lunev, V. V. - 33 Lushchik, V. V. - 116, 462 Lyashenko, B. A. - 224 Lyubchenko, A. P. - 44 Lyubetskaya, L. V. - 122 Lyutyi, E. M. - 180, 456, 708

M

Makar, O. A. - 239 Makarenko, V. G. - 229, 344, 495 Makarov, Yu. V. - 194

Maksimovich, G. G. - 33, 180, 335, 459, 569, 708 Malakhova, E. K. - 223 Mal'kov, A. V. - 624 Mamunya, E. P. - 676 Marichev, V. A. - 139, 388, 636 Martynova, N. G. - 484 Maslov. L. M. - 383 Matiichuk, E. P. - 486 Matveenko, V. N. - 590 Medovoi, L. A. - 488 Melekhov, R. K. - 271, 560 Mel'nik, P. I. - 486 Mikhailov, N. V. - 119 Mikitishin, S. I. - 421, 596, 660 Mikityuk, O. A. - 75, 215 Minaev, V. N. - 98 Mindyuk, A. K. - 189, 392 Mitrofanov, I. B. - 213 Mlynskii, V. L. - 205 Mochernyuk, D. Yu. - 501 Moisa, M. I. - 585 Moiseev, R. G. - 83 Moroz, V. P. - 180

N

Nagirnyi, S. V. - 33, 335
Naichuk, V. I. - 122
Narzullaev, B. N. - 715
Nemanov, M. S. - 414, 653
Neshik, A. P. - 323
Neudakhina, L. M. - 275
Nikiforchin, G. N. - 143, 327, 497, 602, 696
Nikolin, E. S. - 217
Nikonova, N. S. - 266
Nizkin, I. D. - 12
Nosenko, V. A. - 688
Novikova, T. F. - 491

0

Onoprienko, L. M. - 160 Onufrik, T. M. - 18, 162 Orekhov, B. M. - 691 Orlov, Yu. P. - 80 Osadtsiv, P. S. - 15 Oskolkova, L. K. - 109 Ostash, O. P. - 172 Ozhiganov, Yu. G. - 8

P

Paderno, V. N. - 184 Panasyuk, V. V. - 22, 348, 427, 536 Panshin, B. I. - 587

Parkheta, R. G. - 642 Pavlina, V. S. - 459 Pavlov, V. A. - 339 Pavlov, V. N. - 271 Pelekh, B. L. - 499 Pelekh, S. A. - 501 Pengrin, P. N. - 239 Pentin, A. A. - 339 Pereverzev, E. S. - 712 Pertsov, N. V. - 448, 590 Petrivskii, R. I. - 424 Petrosyants, E. A. - 289 Pichugin, V. F. - 289 Pikhel'son, V. F. - 122 Pilyankevich, A. N. - 184 Pistun, I. P. - 93, 238, 344, 478, 594 Pleshakov, É. I. - 309 Pleten', V. S. - 240 Plyatsko, G. V. - 370, 585 Poberezhnyi, O. V. - 437 Poberezhnyi, Ya. L. - 50 Podolinskaya, T. A. - 231 Podstrigach, Ya. S. - 18, 162 Pogoretskii, R. G. - 266 Pokhmurskii, V. I. - 50, 176, 266, 421, 607, 658 Poliéktov, Yu. I. - 103 Polukarova, Z. M. - 149 Polunovskaya, D. S. - 312 Poluyanov, V. L. - 341 Pomyluiko, A. P. - 499 Popina, S. Yu. - 168 Popov, V. S. - 403 Popovich, V. V. - 293 Porter, A. I. - 585 Potapov, V. V. - 103 Povstenko, Yu. Z. - 162 Povyshev, I. A. - 229

R

Pozen, N. L. - 224

Preis, G. A. - 61, 585

Pustotina, S. R. - 197

Radetskaya, É. M. – 275 Rakhshtadt, A. G. – 98 Ratych, L. V. – 293 Razumovskaya, I. V. – 299, 681 Reshetnyak, Yu. S. – 486 Ripetskii, S. I. – 327, 497 Roikh, I. L. – 197 Romaniv, A. N. – 631, 720 Romaniv, O. N. - 37, 143, 327, 442, 524, 696
Romanov, V. V. - 96, 598
Roter, E. A. - 676
Rudenko, V. P. - 78, 238, 344, 495, 685
Rybalko, A. S. - 67
Rybin, V. V. - 103, 414
Ryl'nikov, B. S. - 122
Rytvin, E. I. - 488
Rytvinskaya, É. V. - 563

S

Sadivskii, V. M. - 666 Saidov, K. - 715 Salamashenko, A. G. - 219 Salo, M. D. - 437 Samila, T. M. - 67 Samsonov, G. V. - 285 Sarpov, N. I. - 194 Sarser, G. I. - 86 Savchenko, V. I. - 370 Savitskaya, O. P. - 189, 392 Savitskii, V. N. - 323 Savruk, M. P. - 22, 364, 427, 555 Savvina, N. M. - 106 Sayutin, G. I. - 688 Sazonov, V. V. - 355, 571 Sedov, V. I. - 624 Semenov, V. M. - 98, 373 Sentyurin, E. G. - 75, 215 Serebrin, S. M. - 98 Serednitskii, Ya. A. - 471 Sergeev, N. N. - 601, 639 Severina, L. S. - 672 Shandor, V. V. - 282 Shatinskii, V. F. - 57 Shchepanskii, Ya. S. - 569 Shchesno, L. P. - 672 Shchukin, E. D. - 149, 590 Shebatinov, M. P. - 383 Shelenkov, G. M. - 560 Shetulov, D. I. - 359 Shevchuk, P. R. - 18, 162 Shevelya, V. V. - 530 Shron, R. Z. - 176 Shturman, A. A. - 200 Shul'te, Yu. A. - 33 Shved, M. M. - 111 Sidorak, I. I. - 642 Sidorenko, V. M. - 642 Silin, A. A. - 194 Simonenkova, R. V. - 275

Sirin, Yu. P. - 414, 653 Skitskii, R. Yu. - 335, 459 Skoropad, Z. A. - 90 Skudnov, V. A. - 410 Skvortsov, A. G. - 149 Slabkovskii, I. S. - 111 Slutsker, A. I. - 466 Smirnov, N. S. - 61 Smiyan, O. D. - 650 Smushkevich, L. M. - 410 Sokolov, L. D. - 359, 410 Soldatchenkova, L. S. - 251 Solodkina, V. P. - 484, 598 Soltys, I. F. - 22, 427 Sorokin, V. G. - 341 Sorokivskii, I. S. - 37 Steklov, O. I. - 357 Stepanov, I. A. - 563 Stodilko, V. I. - 266 Stognienko, L. N. - 653 Storozhenko, V. M. - 614 Student, A. Z. - 524 Sulim, G. T. - 550 Sultanov, A. - 715 Summ, B. D. - 251 Svidenyuk, T. A. - 61 Svist, E. I. - 392 Sysoev, V. G. - 375

T

Tabinskii, K. P. - 452 Taraban, A. I. - 672 Teplitskii, V. B. - 200 Teslenko, A. G. - 594 Teterskii, V. A. - 676 Tikhomirova, L. B. - 513 Timonich, D. D. - 80 Tkachenko, N. N. - 246 Tkachev, V. I. - 242, 396, 631 Tokarev, V. P. - 355, 571 Tomas, V. K. - 80 Tomina, S. P. - 656 Toporov, Yu. P. - 282 Triandafilidi, I. I. - 64, 582 Trush, I. I. - 540 Tsoi, N. G. - 240 Tsvetseva, T. G. - 266 Tsygel'nyi, I. M. - 350, 504, 616 Tupilko, V. M. - 696 Turchinovich, L. M. - 681 Tushinskii, L. I. - 513 Tynnyi, A. N. - 86, 209, 611, 676 U

Ukhov, V. L. - 226 Ushkov, S. S. - 563 Ustrekhova, O. A. - 710 Uvarov, V. E. - 8

V

Vasilenko, I. I. - 271 Vasserman, N. N. - 414 Veksler, Yu. G. - 341 Vereshchagin, K. I. - 109 Vinogradova, L. M. - 213, 275 Vitvitskii, P. M. - 168 Vlasyuk, V. E. - 658 Volgin, V. N. - 471 Vonsyatskii, V. A. - 676 Vorob'ev, G. M. - 650 Voronitsyn, I. S. - 693 Vovk, S. T. - 486 Vyval', I. P. - 278

Y

Yakibchuk, P. N. - 605
Yakubovich, S. V. - 475
Yamshchikova, A. I. - 414
Yanchishin, F. P. - 569
Yarema, S. Ya. - 28, 172, 293, 546, 660
Yaremchenko, N. Ya. - 111
Yaremkevich, S. K. - 710
Yarmolovich, I. I. - 563
Yashnaya, G. V. - 650
Yas'kevich, T. R. - 367
Yastrebinskii, A. A. - 466
Yatsyk, B. M. - 111

Yur'ev, S. V. - 116, 462 Yurkiv, O. N. - 189

\mathbf{z}

Zafiiovskii, Yu. M. - 103
Zaidel', B. M. - 348
Zaika, V. I. - 696
Zaimovskii, V. A. - 373
Zametailo, V. V. - 700
Zamiryakin, L. K. - 339
Zamostyanik, I. E. - 78, 478
Zarutskii, G. I. - 54, 495
Zaslavskaya, L. V. - 235
Zboromirskii, A. I. - 28
Zhirovetskii, V. M. - 370
Zhukov, A. A. - 80
Zima, Yu. V. - 103, 143
Zvezdin, Yu. I. - 396

SOVIET MATERIALS SCIENCE Volume 11, Numbers 1-6, 1975

(A translation of Fiziko-Khimicheskaya Mekhanika Materialov)

Volume 11, Number 1 January-February, 1975

	Eng./	Russ
From the Editorial Board	1	3.
Sixth All-Union Conference on the Physicochemical Mechanics of Constructional	3	5
Materials	3	3
 M. K. Gubarev, and V. E. Uvarov Effect of Hydrogen on the Structure and Properties of the β-Titanium Alloy VT15 in Bend Tests in Various Media - B. A. Kolachev, N. Ya. Gusel'nikov, 	8	10
and I. D. Nizkin	12	13
Medium - O. N. Chaplya, N. I. Isaev, and P. S. Osadtsiv	15	16
- Ya, S. Podstrigach, P. R. Shevchuk, and T. M. Onufrik	18	19
Cracks - V. V. Panasyuk, M. P. Savruk, and I. F. Soltys	22	24
-S. Ya. Yarema, G. S. Krestin, and A. I. Zboromirskii	28	31
N. I. Azarov, and V. N. Fedirko	- 33	37
Temper Steels - O. N. Romaniv, N. A. Deev, and I. S. Sorokivskii	37	41
 M. A. Balter, L. Ya. Gol'dshtein, A. P. Lyubchenko, and A. A. Chernyakova, Kinetics of Fracture and the Redistribution of Residual Stresses in Cyclic Deformation of Rolled Specimens - V. I. Pokhmurskii, T. N. Kalichak, Ya. L. Poberezhnyi, 	44	47
and A. M. Krokhmal'nyi	. 50	53
- G. I. Zarutskii	54	57
- V. F. Shatinskii and V. I. Kopylov Effect of Diamond Polishing on the Corrosion Resistance of an Enameled Coating	57	59
- A. N. Chernyavskii, G. A. Preis, N. S. Smirnov, and T. A. Svidenyuk	61	64
Strengthening of Hard Alloys by Oxidation and Vibration - I. I. Triandafilidi	64	67
Stability of Diffusion Coatings in Molten Glass - V. B. Dalisov, A. S. Rybalko, and T. M. Samila	67	70
Effect of Temperature on the Fracture Characteristics of Polyethylene in Liquid Media		
- V. I. Grigor'ev	70	73
- O. A. Mikityuk, Yu. A. Kolevatov, and E. G. Sentyurin	75	79
SCIENCE FOR PRODUCTION FMI-1 Lubrication Concentrate for Metal Working with Pressure - A. S. Chuchmarev,		
I. E. Zamostyanik, K. B. Katsov, V. P. Rudenko, and G. V. Karpenko.	78	82

	Engi.	/ nuss
Surface Hardening of Cast-Iron Components by Irradiation from an Optical Quantum		
Generator - A. A. Zhukov, A. N. Kokora, D. D. Timonich, V. K. Tomas,		
B. N. Kolesnikov, Yu. P. Orlov, and N. S. Goryachev	80	84
- R. G. Moiseev and Yu. I. Babei	83	86
by the Method of Accelerated Thermal Aging under Elongational Stresses — G. I. Sarser, B. D. Goikhman, N. G. Kalinin, and A. N. Tynnyi Efficiency of Diamond and El'bor Wheels with Organic Bonds and Active Fillers	86	89
- N. S. Koshevoi and Z. A. Skoropad	90	93
BRIEF COMMUNICATIONS		
Effect of Rolling on the Low-Cycle Endurance of Steel in Working Media	93	96
- G. V. Karpenko, I. P. Pistun, A. B. Kuslitskii, and K. B. Katsov Effect of Intercrystalline Corrosion on the Cyclic Strength of Steel Kh18N9		
- A. Ya. Furman and V. V. Romanov	96	98
A. G. Rakhshtadt, S. M. Serebrin, and V. N. Minaev	98	99
and A. V. Golubnichii	100	101
and Yu. I. Poliéktov	103	103
- N. M. Savvina, P. I. Kudryavtsev, and I. V. Kozlov	106	104
Alkaline Media - K. I. Vereshchagin and L. K. Oskolkova	109	106
Change in Electrical Resistivity and Thermo-EMF during the Deformation of Iron		
Saturated with Hydrogen - M. M. Shved, I. S. Slabkovskii, N. Ya. Yaremchenko, R. S. Kozemchuk, and B. M. Yatsyk	111	107
Life of Stressed Pentaplast under the Action of Organochlorine Agents	114	108
- V. V. Kravtsov and É. M. Gutman		
V. V. Lushchik, and S. V. Yur'ev	116	110
and N. V. Mikhailov	119	112
Heat Resistance of Steel Castings Surface Alloyed with Aluminum with Ferrosilicochromium - V. I. Naichuk, V. F. Pikhel'son, B. S. Ryl'nikov,		
and L. V. Lyubetskaya,	122	114
Scientific and Technical Information	124	116
ANNIVERSARIES		
Ivan Nikolaevich Bogachev (On His Seventieth Birthday)	127	118
Georgii Mikhailovich Bartenev (On His Sixtieth Birthday)	128	119
Volume 11, Number 2 March-April, 1975		
Mechanical Treatment as a Method of Increasing the Life of Construction		
Alloys in Active Media - Yu. I. Babei	129	3
- V. A. Marichev	139	14
Steels by Water - O. N. Romaniv, Yu. V. Zima, G. N. Nikiforchin, and N. L. Kuklyak	143	17
	* 10	

	Eng./	Huss.
Effect of the Form of Loading on the Degree of Manifestation of the Adsorption-		
Induced Loss of Strength and Ductility in Metals - Z. M. Polukarova,		
A. G. Skvortsov, L.S. Bryukhanova, and E. D. Shchukin Corrosion Diagram and Quantitative Assessment of the Resistance to Corrosion	149	23
Cracking - V. V. Gerasimov	153	27
Service Life of Corrosion-Damaged Wire - A. A. Filip'ev	156	30
L. M. Onoprienko, and V. A. Gorban' Surface Phemomena in Solids Taking into Account Physicomechanical Processes - Ya. S. Podstrigach, P. R. Shevchuk, T. M. Onufrik,	160	33
and Yu. Z. Povstenko	162	36
Defective Slabs - P. M. Vitvitskii and S. Yu. Popina	168	43
and O. P. Ostash	172	48
O. A. Bakshi, V. I. Pokhmurskii, and R. Z. Shron	176	52
Reinforced with Networks - G. G. Maksimovich, D. M. Karpinos, V. Kh. Kadyrov, E. M. Lyutyi, V. P. Moroz, and A. V. Filipovskii	180	57
Measurements - A. N. Pilyankevich and V. N. Paderno	184	60
A. N. Gopanenko, and O. N. Yurkiv	189	65
N. I. Sarpov, and A. A. Silin Properties of Vacuum Brass Coatings - I. L. Roikh, L. K. Glukhova,	194	71
E. V. Efimovich, S. R. Pustotina, N. A. Litovchenko, and V. P. Kirichenko A Method of Strengthening Plastic Products in Polymer Solvents	197	74
- A. A. Shturman, V. L. Avramenko, and V. B. Teplitskii	200	78
- V. L. Mlynskii, N. I. Egorenkov, and V. A. Belyi	205	83
- V. I. Grigor'ev, V. P. Gordienko, A. N. Tynnyi, and R. E. Il'enko	209	87
and A. P. Karpov	213	91
- Yu. A. Kolevatov, O. A. Mikityuk, E. G. Sentyurin, and M. M. Gudimov BRIEF COMMUNICATIONS	215	93
Effect of Static Pulling Stresses on the Fatigue and Adsorption-Fatigue Strength of 30KhGSA Steel Exposed to Periodically Varied Twisting		
- A. N. Kuroshchenov, E. S. Nikolin, V. I. Kapinos, and G. V. Karpenko	217	96
in a Corrosive Medium - A. G. Salamashenko Effect of Frequency of Stressing on the Low-Cycle Fatigue Life of Steel in Seawater	219	97
- A. V. Kobzaruk	221	98
E. K. Malakhova, and L. B. Berezovskii	223	100
Media - N. L. Pozen, B. A. Gryaznov, and B. A. Lyashenko	224	101

	Engl./	Huss.
Effect of Electrochemical Hydrogenation on the Short-Term Strength of Some Aluminum Alloys at Elevated Temperatures - V. K. Afanas'ev		
and V. L. Ukhov	226	103
in Superheated Steam - V. G. Makarenko and I. A. Povyshev	229	105
- V. A. Gol'tsov and T. A. Podolinskaya	231	106
- V. I. Didoshak	233	108
and T. N. Kalichak	235	110
I. P. Pistun, I. V. Kokotailo, and G. V. Karpenko Effect of the Method of Producing Stress Concentrators on Cold Brittleness	238	112
- Z. G. Dutsyak, O. A. Makar, G. I. Cherepanova, and P. N. Pengrin	239	113
and V. I. Kolesnichenko	240	113
P. V. Gel'b and R. A. Ryabov. Hydrogen in Metals and Alloys — Reviewed by G. V. Karpenko and V. I. Tkachev	242	116
SCIENTIFIC AND TECHNICAL INFORMATION Important Articles from the "Interaction of Media" Section Published in 1974 in "Metallurgical Transactions"	243	118
CHRONICLES The Seminar on the Physicochemical Mechanics of Materials - N. N. Tkachenko	246	120
Volume 11, Number 3 May-June, 1975		
The Thirtieth Anniversary of the Great Victory	249	3
G. I.Den'shchikova, and B. D. Summ	251	5
- G. S. Kit	255	9
N. S. Nikonova, V. I. Stodilko, and I. I. Kadar	266	20
and I. I. Vasilenko	271	25
A. Ya. Korolev, and R. V. Simonenkova	275	29
I. P. Vyval ¹ , and I. I. Dikii	278	31
- B. V. Deryagin, Yu. P. Toporov, and V. V. Shandor	282	35
Friction and Wear Mechanism of Metals - G. V. Samsonov and V. I. Kovtun Corrosion-Mechanical Wear in Boundary Friction - O. K. Angelopulo,	285	38
V. F. Pichugin, and E. A. Petrosyants	289	42

	Eng./	Huss.
Fatigue-Fracture Diagrams of Steel 65G after Various Heat Treatments		
	293	45
-S. Ya. Yarema, L. V. Ratych, and V. V. Popovich	299	45
Presence of Equilibrium Cracks in Amorphous Solids - I. V. Razumovskaya		51
Duration of Subcritical Crack Growth in Metallic Bodies — G. G. Kuz'min Experimental Investigation of Stress Concentration in a Piecewise-Uniform Strip Weakened by a Groove — D. V. Grilitskii, E. V. Buina, O. I. Dumanskii, and I. P.	302	54
Belokur	305	56
the Development of Reversible Temper Embrittlement in Steels – M. M. Fetisova and É. I. Pleshakov	309	60
- V. I. Arkharov, A. M. Gaisinskaya, Z. F. Antonova, and D. S. Polunovskaya Accumulation of Damages and the Time Relationship of Solids under Conditions of	312	62
Physicochemical Transformations - B. D. Goikhman	315	65
Some Processes Accompanying the Dispersion of Components of the System PMMA – Steel St.3 – G. A. Gorokhovskii, I. I. Agulov, T. V. Dmitrieva,		
and M. I. Dudník	320	69
Physicochemical Processes Occurring during Frictional Interaction between Natural Polymers and Metals - B. I. Kupchinov, V. A. Belyi, A. P. Neshik,		
V. Ya. Astashin, and V. N. Savitskii	323	72
METHODS OF EXPERIMENTAL INVESTIGATION		
Means of Developing Test Equipment for Determining the Crack Resistance of Materials in Long-Term Loading - O. N. Romaniv, G. N. Nikiforchin, I. A. Berezyuk,		
and S. I. Ripetskii	327	77
V. N. Fedirko, R. Yu. Skitskii, and S. V. Nagirnyi	335	85
V. D. Gmyzin, V. A. Pavlov, and A. A. Pentin	339	88
Temperatures - Yu. G. Veksler, Yu. A. Karasyuk, V. L. Poluyanov,		
and V. G. Sorokin	341	91
and V. G. Makarenko	344	94
and B. M. Zaidel' Approximate Method of Estimating the Diffusion Coefficient of Liquids Diffusing into Polymer Materials for Low Values of the Fourier Number	348	97
-Yu. A. Kolevatov and I. M. Tsygel'nyi	350	98
BRIEF COMMUNICATIONS Frequency Effect in the Fatigue of the Aluminum Alloy D16T at Elevated Temperatures and with Local Stress Concentration - A. V. Karlashov, V. P. Tokarev,		
and V. V. Sazonov	355	103
and V. P. Fomenko	357	105
- V. N. Lisin, O. A. Kolotov, D. I. Shetulov, and L. D. Sokolov	359	107
Kinetics of Fatigue-Crack Growth - I. P. Gnyp	361	108
- M. P. Savruk	364	110
Limiting Equilibrium of Half-Plane with Lateral Notch - T. R. Yas'kevich Stress Distribution around a Single Crack Loaded by Internal Pressure [T]	367	112
- T. Yu. Kepich, V. I. Savchenko, G. V. Plyatsko, and V. M. Zhirovetskii	370	115

	Engl.	/Rus	
Fatigue Strength of Spring Steel Subjected to High-Temperature Thermomechanical Treatment and "Inheritance" Treatment - M. L. Bernshtein, S. A. Guseinov,			
V. A. Zaimovskii, and V. M. Semenov	373 375		
	010	110	
SCIENTIFIC AND TECHNICAL INFORMATION Important Author's Certificates of the Physicomechanical Institute of the Academy of Sciences of the Ukrainian SSR	378	121	
Volume 11, Number 4 July-August, 1975			
Determination of Cyclic Ductile Fracture in a Corrosive Medium - V. S. Ivanova,			
L. R. Botvina, L. M. Maslov, and M. P. Shebatinov	383	3	
Solutions - V. A. Marichev	388	7	
and Corrosion Cracking of Steel in Sulfuric Acid - A. K. Mindyuk, E. I. Svist,	202	12	
O. P. Savitskaya, E. B. Goyan, and A. N. Gopanenko	392		
of Hydrogen - V. I. Tkachev, A. K. Litvin, and Yu. I. Zvezdin Effect of Zirconium on the Microstructure, Hydrogen Concentration, and Low-Cycle	396	16	
Fatigue Strength of Alloy AMg6 - A. P. Klimko	400	21	
Wear - V. S. Popov, N. N. Brykov, and V. A. Guk The Need to Consider Electrochemical Effects when Investigating the Working Mechanism of Water-Based Cutting Fluids - V. A. Kuznetsov, Yu. M. Korobov,	403	24	
and Yu. G. Kotlov	407	27	
and L. D. Sokolov Aspects of the Effect of a Corrosive Medium on the Fatigue Strength of a Titanium Alloy of the VT6 Type - V. V. Rybin, Yu. P. Sirin, B. B. Chechulin,	410	31	
A. I. Yamshchikova, N. N. Vasserman, and M. S. Nemanov	414	35	
and Zh. Baishumurov Time to Fatigue-Crack Generation and Speed of Fatigue-Crack Growth in Steels	418	39	
08kp and U8 - V. I. Pokhmurskii, M. O. Levitskii, and S. I. Mikitishin Effect of Heat Treatment and Operating Media on the Cracking of Thermally	421	41	
Strengthened 20GS2 Reinforcing Steel - R. I. Petrivskii, G. M. Krasovskaya,	404	45	
S. N. Alekseev, B. V. Kroshkov, and I. I. Dikii Temperature Fields and Stresses in an Elastic Half-Plane with Arbitrary Distribution	424		
of Thermally Insulated Cracks - V. V. Panasyuk, M. P. Savruk, and I. F. Soltys Determination of the Adsorption Reduction in Strength of Graphite in Air at High	427		
Pressure – K. E. Dubrovskii	433	54	
Transversally Isotropic Body with a Crack - O. V. Poberezhnyi and M. K. Salo Some Singularities of the Influence of Residual Austenite on the Fatigue and	437	58	
Crack-Formation Resistance of Steels Subjected to Low-Temperature Tempering - O. N. Romaniv, Ya. N. Gladkii, and N. A. Deev	442	63	
Effect of Corrosive Media on Microfracturing and the Treatment of Nickel and Quartz - Le Van Zien, N. V. Pertsov, and Yu. V. Gorvunov	448	70	

	Engl.	./Russ
Wear Resistance of Heat Treated and Chemical-Thermally Treated Steel Parts in the Presence of an Abrasive Layer - V. M. Golubets, V. V. Kozub, and K. P. Tabinskii. Strength of Dispersion-Hardened Molybdenum Alloys - R. A. Alfintseva, V. A. Borisenko,	452	73
A. M. Lemeshko, and E. M. Lyutyi	456	77
- G. G. Maksimovich, V. S. Pavlina, R. Yu. Skitskii, and S. M. Kudlak	459	81
- V. V. Lushchik and S. V. Yur'ev	462	84
and A. A. Yastrebinskii	466	89
Ya. A. Serednitskii, B. O. Dombrovskii, and V. N. Volgin	471	94
S. V. Yakubovich, and P. V. Kozlov	475	98
Effect of Machining on Low-Cycle Life of Steels in a Corrosive Medium - G. V. Karpenko,		
L. P. Pistun, A. B. Kuslitskii, and L. E. Zamostyanik	478	102
Anomalous Acceleration of Diffusion in White Layer Formation — Yu. L Babei Effect of Inhibited Seawater on Cyclic Strength of Low-Carbon Steel — V. P. Solodkina	481	104
and N. G. Martynova	484	106
Z. P. Borodaikevich, E. P. Matiichuk, and S. T. Vovk Effect of Molten Glass on the Corrosion Resistance and High-Temperature Strength	486	107
of Platinum, Palladium, and Their Alloys — E. L. Rytvin and L. A. Medovoi Internal Friction in Hydrogen-Saturated Steel U9A — T. F. Novikova, V. V. Kuznetsov,	488	108
G. V. Khaldeev, and E. V. Balduev	491	110
- Yu. G. Bobro, M. F. Baranov, and O. I. Kovalenko	493	112
V. P. Rudenko, I. V. Kokotailo, G. I. Zarutskii, and V. G. Makarenko	495	113
I. A. Berezyuk, and N. A. Lenets	497	115
Plates - B. L. Pelekh and A. P. Pomyluiko	499	116
Plate Having a Crack - D. Yu. Mochernyuk, S. A. Pelekh, and L. T. Berezhnitskii Emergence of Surface Electric Polarization in Specimens of Polymethyl Methacrylate	501	118
during Deformation - I. M. Tsygel'nyi	504	120
CHRONICLES The 11th Session of the Scientific Council on the Problem of *New Processes of		
Obtaining and Working Metallic Materials" - K. B. Katsov	506	122
Volume 11, Number 5 September-October, 1975		
Resistance of Metals and Alloys to Crack Propagation	509	3
- L. I. Tushinskii and L. B. Tikhomirova	513	10
O. N. Romaniv, N. A. Deev, Ya. N. Gladkii, and A. Z. Student	524	23

	Eng./	Russ.
Microyield and Nature of the Physical Fatigue Limit of Body-Centered-Cubic		
Metals - V. V. Shevelya and A. N. Gladchenko	530	28
- V. V. Panasyuk and A. E. Andreikiv	536	35
and I. I. Trush	540	40
-S. Ya. Yarema	546	48
Plane with Cracks – G. T. Sulim and D. V. Grilitskii	550 555	52 59
 O. Ya. Lizun, and G. M. Shelenkov Comparison of the Long-Term Strength of α- and α+β-Titanium Alloys under a Layer of Chlorides in the Temperature Range 200-380°C - A. A. Gorbakon', É. V. Rytvinskaya, I. A. Stepanov, S. S. Ushkov, 	560	65
and I. I. Yarmolovich	563	67
of Low-Carbon Steel Plates to Brittle Fracture - V. N. Fedirko	566	71
G. G. Maksimovich, and Ya. S. Shchepanskii	569	74
- A. V. Karlashov, V. P. Tokarev, and V. V. Sazonov	571	76
of Steel in Impact Bending — Yu. I. Babei and E. Ya. Gusti	574	79
on the Corrosion-Fatigue Strength of Steel - V. I. Ivanets	579	85
- I. I. Triandafilidi and M. G. Loshak	582	88
- G. V. Plyatsko, A. I. Porter, G. A. Preis, and M. I. Moisa	585	91
- E. A. Barbashev, V. A. Bogatov, V. I. Kozin, and B. I. Panshin	587	94
~ V. N. Matveenko, N. V. Pertsov, and E. D. Shchukin	590	97
Effect of Angle of Impact of Blast Wave on Low-Cycle Endurance of Steel 20 in Working Media - A. G. Teslenko, I. P. Pistun, A. B. Kuslitskii,		
and R. P. Didyk	594	102
- S. I. Mikitishin and M. O. Levitskii	596	103
- V. P. Solodkina, S. A. Balezin, and V. V. Romanov	598	105
- M. A. Krishtal, B. A. Gusev, S. N. Alekseev, and N. N. Sergeev Effect of Aqueous Medium on Long-Term Crack Stability of Heat-Hardened	601	107
Reinforcement - G. N. Nikiforchin and V. V. Kalmykov	602	108
Potential - A. A. Barkov and G. A. Grigor'ev	604	110
a Cubic Lattice - P. N. Yakibchuk	605	111
V. B. Dalisov, and V. I. Pokhmurskii	607	112

	Eng	./Russ
Effect of Organic Chloride Agents on Resistance of Pentaplast Coatings		
- V. V. Kravtsov and É. M. Gutman		113
and A. N. Tynnyi		115
and L. A. Akopyan A Method of Examining the Piezoelectric Effect in Polymers — I. M. Tsygel'nyi and V. L. Kuz'menko		117
TECHNICAL INFORMATION		
Brief Reviews of New Books	618	121
Volume 11, Number 6 November-December, 1975		
PHENOMENOLOGY AND MECHANISMS OF HYDROGEN EMBRITTLEMENT IN METALS AND ALLOYS		
Hydrogen in Metals - G. V. Karpenko	621	3
Use of Linear Mechanics of Fracture in Studying Hydrogen Embrittlement of		
Titanium Alloys - B. A. Kolachev, A. V. Mal'kov, and V. I. Sedov	624	7
Theory of Crack Growth in Metals under the Action of Hydrogen - V. T. Alymov Low-Cycle Fatigue of Iron and Steel in Gaseous Hydrogen - A. N. Romaniv,	628	12
V. I. Tkachev, and G. V. Karpenko	631	15
Zone of a High-Strength Steel at the Tip of a Growing Crack - V. A. Marichev Investigation of the Mobility of Microcracks in Structural Steel during Long-Term	636	21
Tests in Hydrogen-Bearing Media - S. A. Golovin, V. S. Ageev, N. N. Sergeev, and D. M. Levin	639	24
Causes of the Anomalous Variation in the Parameters of Diffusion of Hydrogen in Iron		
at Temperatures near 200°C - V. M. Sidorenko, I. I. Sidorak, and R. G. Parkheta Microstructural Studies of the Failure of High-Strength Steels in Low-Cycle Fatigue	642	28
-Kh. B. Kalinichenko	647	34
Study of the Hydrogenation of Steel G13L Components during Use-N. M. Aptekar's	CEO	97
S. L. Babchenko, G. M. Vorobiev, G. V. Yashnaya, and O. D. Smiyan Effect of a Corrosion Medium on the Cyclic Strength of Welded Joints in a Titanium Alloy	650	37
of Type VT6 - I. S. Fatiev, M. S. Nemanov, L. N. Stognienko, and Yu. P. Sirin Effect of Mechanical Surface Treatment on the Resistance of Steel 08Kh18N12T to	653	40
Corrosion Cracking - L. I. Aksenova, S. P. Tomina, and V. I. Gerasimov	656	43
Assessing the Failure Toughness of Metals from the Plastic Deformation of		
Fracture Surfaces - V. I. Pokhmurskii, I. P. Gnyp, and V. E. Vlasyuk Analytical Description of the Fatigue-Failure Diagram of Materials - S. Ya. Yarema	658	45
and S. I. Mikitishin	660	47
Body – L. T. Berezhnitskii and V. M. Sadivskii	666	55
- A. S. Eremenko, L. P. Shchesno, A. I. Taraban, and L. S. Severina	672	62
Estimation of Absorbed Dose by EPR in the Irradiation of Polymers in the Plasma of an Electrodeless High-Frequency Discharge - V. A. Vonsyatskii, E. P. Mamunya,		
E. A. Roter, V. A. Teterskii, and A. N. Tynnyi	676	67
Effect of the Surrounding Medium on the Deformation of Microvolumes of Inorganic	601	79
Glasses - L. V. Razumovskaya, L. M. Turchinovich, and D. B. Dorzhiev	681	73
SCIENCE FOR PRODUCTION		
Life of Sheet Materials after Removal of Corrosion Defects by Building-up	605	77
- V. P. Rudenko	685	77

	Eng	./Russ
Abrasion of Grinding Disks in Relation to Chemical Activity of the Medium during		
Machining of Titanium Alloys - G. I. Sayutin, V. A. Nosenko, and N. L. Bogomolov. Relative Wear Resistance of Track Pins of Steel ShKh15 Produced by Hydrostatic	688	80
Extrusion - B. M. Orekhov, A. P. Getmanskii, A. L. Gulak, and V. V. Bedarev Effect of Electrolyte Circulation on Gas Content and Mechanical Properties of	691	84
Chromium Coatings - I. S. Voronitsyn, B. M. Agalakov, and V. L. Baranovskii Fracture Toughness of High-Strength Bar Reinforcement - V. M. Tupilko,	693	86
G. N. Nikiforchin, O. N. Romaniv, and V. I. Zaika	696	89
A. D. Gnatyuk, M. G. Loshak, and V. V. Zametailo	700	94
BRIEF COMMUNICATIONS		
Residual-Macrostress Stability in Cyclic Loading of Steel - Yu. I. Babei and		
M. F. Berezhnitskaya	703	97
Seawater - A. V. Kobzaruk	706	99
-G. G. Maksimovich, V. Kh. Kadyrov, E. M. Lyutyi, and A. V. Filipovskii Thermoresistometric Analysis of the Ceramet Alloy SmCo ₈ - S. K. Yaremkevich	708	101
and O. A. Ustrekhova	710	103
Correction for Nonuniform Macrostress Distribution in Fatigue-Resistance Analysis = E. S. Pereverzev	712	104
in Bakery Media - S. V. Batychko	714	106
S. N. Karimov, K. Saidov, and A. Sultanov	715	107
TECHNICAL INFORMATION Current Papers on the Effects of Hydrogen on the Mechanical Properties of Alloys	718	109
CHRONICLE All-Union Seminar on Gases in Metals — A. N. Romaniv	720	111
OBITUARY Gurii Nikolaevich Savin.	723	113
INDEX		
Author Index, Volume 11, Numbers 1-6, 1975	727	
Tables of Contents, Volume 11, Numbers 1-6, 1975	731	

